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In Re Application of: Egashira *et al.*

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Examiner: Pond, Robert M.

Title: **METHOD AND SYSTEM FOR COMMODITY SALES**

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**REVISED APPEAL BRIEF**

**Real Party in Interest**

International Business Machines Corporation is the real party in interest.

**Related Appeals and Interferences**

Applicants state that they are not currently aware of any prior or pending appeals, interferences or judicial proceedings which may directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**Claim Status**

As filed, this case included claims 1-10. Claims 1-10 are currently pending and have been rejected as set forth in the Office Action dated May 22, 2007. The claims on appeal are claims 1-10.

### **Status of Amendments**

There have not been any amendments filed subsequent to the last issued Final Office Action.

### **Summary of Claimed Subject Matter**

The claimed invention relates generally to a method and system for matching commodity suppliers with intending purchasers. Below is a concise explanation of the subjected matter defined in independent claims 1 and 6 which are each involved in this appeal. In addition, the summary points out elements in the figures that correspond to claim features as well as sections in the specification that discuss the features.

Claim 1 claims a computer implemented method for matching commodity suppliers with intending purchasers, the method comprising the steps of: obtaining supply information including a plurality of supply quantities and a supply price that for each supply quantity indicates a supply cost from at least one commodity supplier for a particular commodity item (*see e.g.*, p. 8, ln. 12-17, FIG. 2, element S1, FIG. 3, FIG. 4) and arranging the information into a supply list for storage in a database, (*see e.g.*, p. 8, ln. 17-18, FIG. 2, element S1) wherein the supply price lowers as the supply quantity increases, (*see e.g.*, p. 14, ln. 20-23, FIG. 4) and wherein each supply quantity is classified into a plurality of supply quantity ranges that indicate a maximum supply quantity range for each commodity supplier; (*see e.g.*, p. 9, ln. 10-16, FIG. 4); receiving purchase wish information including a desired purchase price and a desired purchase quantity for said particular commodity item from intending purchasers through a network for a predetermined period of time (*see e.g.*, p. 9, ln.26-p.10, ln. 13, FIG. 2, element S2,

FIG. 5); storing the received purchase wish information in said database; (*see e.g.*, p. 10, ln. 7-11, FIG. 2, element S3, FIG. 6); after said predetermined period of time, collecting said purchase wish information stored in said database and producing a purchase wish list having the information arranged in a predetermined order; (*see e.g.*, p. 10, ln. 14-19, FIG. 6 showing purchase wish list); selecting an optimum combination of intending purchasers, selling quantities, selling prices, commodity suppliers, supply quantities, and supply prices by comparing only the desired purchase price and the desired purchase quantity of said purchase wish list with the supply price and supply quantity of said supply list by calculating a total profit using an iterative aggregation of profit for each additional intending purchaser; (*see e.g.*, p. 11, ln. 1-11, FIG. 2, element S4, FIG. 7, p. 13, ln. 1-p.17, ln. 10 explaining calculation of aggregate gross profit) and transmitting a purchase admission notification to the intending purchasers selected in said selecting step; (*see e.g.*, p.11, ln. 12-27, FIG. 2, element S5) wherein an intending purchaser who bids lower than the supply price for the particular supply quantity is not automatically disqualified. (*see e.g.*, FIG. 7, p. 13, ln. 1-p.17, ln. 10, explaining calculation of aggregate gross profit).

Claim 6 claims a commodity sales system comprising: a database storing, in a supply list, information about plurality of supply quantities and a supply price that for each supply quantity indicates a supply cost obtained from at least one commodity supplier for the particular commodity item, (*see e.g.*, p. 8, ln. 12-17, FIG. 2, element S1, FIG. 3, FIG. 4) wherein the supply price lowers as the supply quantity increases, (*see e.g.*, p. 14, ln. 20-23, FIG. 4) and wherein each supply quantity is classified into a supply quantity range indicating a maximum supply quantity range for each commodity supplier; (*see e.g.*, p. 9, ln. 10-16, FIG. 4); means for receiving purchase wish information including a desired purchase price and a desired purchase quantity for

said particular commodity item from intending purchasers through a network for a predetermined period of time, (*see e.g.*, p. 9, ln.26-p.10, ln. 13, FIG. 2, element S2, FIG. 5) and storing the received purchase wish information in said database; (*see e.g.*, p. 10, ln. 7-11, FIG. 2, element S3, FIG. 6); means for collecting said purchase wish information stored in said database and producing a purchase wish list having said information arranged in a predetermined order after said predetermined period of time; (*see e.g.*, p. 10, ln. 14-19, FIG. 6 showing purchase wish list); means for selecting an optimum combination of intending purchasers, selling quantities, selling prices, commodity suppliers, supply quantities, and supply prices by comparing only the desired purchase price and the desired purchase quantity of said purchase wish list with the supply price and supply quantity of said supply list; (*see e.g.*, p. 11, ln. 1-11, FIG. 2, element S4, p. 13, ln. 1-p.17, ln. 10 explaining calculation of aggregate gross profit) and means for transmitting a purchase admission notification to the intending purchasers selected by said selecting means. (*see e.g.*, p.11, ln. 12-27, FIG. 2, element S5).

### **Grounds of Rejection to be Reviewed on Appeal**

The claims on appeal are claims 1-10. Claims 1-10 stand rejected by the Office under 35 U.S.C. §103(a) as allegedly being unpatentable over Brodsky (U.S. Pat. No. 6,751,597), hereinafter "Brodsky", in view of Fisher (U.S. Pat. No. 5,835,896), hereinafter "Fisher". Therefore, the grounds of rejection to be reviewed on appeal are whether claims 1-10 are patentable under 35 U.S.C. §103(a) over Brodsky and Fisher.

## ARGUMENT

Turning to the rejection, in the Final Office Action, claims 1-10 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Brodsky (US 6,751,597), hereinafter “Brodsky”, in view of Fisher (US 5,835,896), hereinafter “Fisher.” The Office asserts that Brodsky teaches all of the claim limitations of claims 1-10 except transmitting a purchase admission notification to the intending purchasers. Applicants respectfully disagree with the Office’s assertions, and submit that this rejection is clearly not proper and without basis because, as discussed below, there are several other claim limitations that are not disclosed by Brodsky or Fisher.

In addition, Applicants note that the Examiner improperly utilizes information external to the references, allegedly from his own experience in sales, in connection with the rejection. As such use is improper, Applicants will limit their discussion to the disclosures and teachings of the claimed references (Brodsky and Fisher) themselves.

The cited references fail to teach or suggest each and every element of independent claims 1 and 6. For example, Applicants submit that neither Brodsky nor Fisher discloses, either singly or in combination, *inter alia*:

- (1) that an optimum combination is selected by calculating a total profit using an iterative aggregation of profit for each additional intending purchaser;
- (2) that each supply quantity is classified into a plurality of supply quantity ranges that indicate a maximum supply quantity range for each commodity supplier; and
- (3) that an intending purchaser who bids lower than the supply price for the particular supply quantity is not automatically disqualified.

For these reasons, discussed in more detail below, Applicants submit that the Office has failed to state a *prima facie* case of obviousness with respect to independent claims 1 and 6, and Applicants therefore submit that this application is in condition for allowance.

**1. Cited references fail to disclose “selecting an optimum combination...by calculating a total profit using an iterative aggregation of profit for each additional intending purchaser.”**

Applicants submit that Brodsky fails to teach, *inter alia*, the selection of an optimum combination of intending purchasers, selling quantities, selling prices, commodity suppliers, supply quantities, and supply prices by comparing only the desired purchase price and the desired purchase quantity of said purchase wish list with the supply price and supply quantity of said supply list by calculating a total profit using an iterative aggregation of profit for each additional intending purchaser. (*See* claim 1). Interpreting Brodsky for purposes of this request only, Applicants submit that Brodsky teaches a simple matchmaking system for traders. Essentially, the system compares what traders are willing to sell and pay, and once a match is found, the algorithm outputs the match. *See generally*, Brodsky, col. 4, ln. 44 – col. 5, ln. 60. In contrast, the claimed invention works through an entire algorithm, using an iterative aggregation of profit, to ultimately maximize the profit of the intermediary/seller.

Applicants further submit that the combination with Fisher, even if, *arguendo*, proper, fails to cure this deficiency because Fisher also fails to disclose, *inter alia*, using the iterative aggregation calculation of the claimed invention to select an optimum combination of intending purchasers, selling quantities, selling prices, commodity suppliers, supply quantities, and supply prices. As a result, Applicants respectfully submit that the Office has failed to state a *prima facie* case of obviousness with respect to independent claims 1 and 6.

**2. Cited references fail to disclose “each supply quantity is classified into a plurality of supply quantity ranges that indicate a maximum supply quantity range for each commodity supplier.”**

Applicants submit that Brodsky fails to teach, *inter alia*, classification of each supply quantity into a plurality of supply quantity ranges that indicate a maximum supply quantity range for each commodity supplier. Brodsky merely discloses optimization methods in terms of exact supply quantities. For example, in Brodsky, “the recommended set of transactions will indicate exactly with whom the transaction should be made, the exact GIVE and TAKE items and their quantities, as well as other relevant parameters (e.g., price and profit).” Brodsky, Col. 11, lines 38-41. Brodsky, however, fails to indicate a maximum supply quantity range for each commodity supplier. In contrast, in the present invention, a maximum supply capability for each supplier is given in terms of a range. As shown in FIG. 4, “N/A” illustrates that a corresponding supplier cannot supply the quantities in the designated ranges. The supplier Cb can supply up to 3000 units or pieces while the supplier Cc can supply up to 2000 units or pieces.

Applicants further submit that the combination with Fisher, even if, *arguendo*, proper, fails to cure this deficiency because Fisher also fails to disclose, *inter alia*, classification of each supply quantity into a plurality of supply quantity ranges that indicate a maximum supply quantity range for each commodity supplier. In contrast, Fisher teaches that, “[t]hese catalog pages preferably contain the current high bid, bid increment, quantity available, merchandise description, and picture of the item.” Fisher, Col. 6, lines 28-30. Fisher further teaches that there is a minimum bid allowed for a merchandise item. Fisher, Col. 10, lines 12-14. To this extent, Fisher teaches a quantity available and a minimum bid allowed. However, Fisher does

not teach that its minimum bid allowed is dependent upon the quantity available or that its minimum bid allowed lowers as the quantity available increases.

In contrast, the claimed invention includes "...obtaining supply information including a plurality of supply quantities and a supply price that depends on each supply quantity from at least one commodity supplier for a particular commodity item...wherein the supply price lowers as the supply quantity increases." (See Claim 1). As such, unlike the quantity available and minimum bid allowed of Fisher, a supply price of the claimed invention depends from each supply quantity and the supply price lowers as the supply quantity increases. For these reasons, the supply price and supply quantity of the claimed invention are not taught by the quantity available and minimum bid allowed of Fisher. Accordingly, Applicants submit that Brodsky and Fisher, singly or in combination, fail to disclose each and every element of claims 1 and 6.

**3. Cited references fail to disclose that "an intending purchaser who bids lower than the supply price for the particular supply quantity is not automatically disqualified."**

In addition, Applicants submit that neither reference discloses, either singly or in combination, *inter alia*, that an intending purchaser who bids lower than the supply price for the particular supply quantity is not automatically disqualified. *See* claim 1. Brodsky discloses a Boolean "Give-Take-Item-Match(IS1,IS2)" system that returns a TRUE value "if and only if the IS1 satisfies the requirements of IS2; and it returns FALSE otherwise." Col. 7, lines 64-67. If a purchaser in Brodsky provides a bid price (IS1) that is lower than the supply price (IS2), no match would be found and a FALSE indication would be returned. As such, based on the Boolean logic disclosed by Brodsky, an intending purchaser failing to offer a bid matching the



supply price for the particular supply quantity would be automatically disqualified. Therefore, Applicants submit that Brodsky fails to disclose each and every element of the invention.

Applicants further submit that the combination with Fisher, even if, *arguendo*, proper, fails to cure this deficiency because Fisher also fails to disclose, *inter alia*, that an intending purchaser who submits a bid lower than the supply price for the particular supply quantity is not automatically disqualified. As clearly shown in FIG. 10, Fisher discloses in step 93 that if a bid is below a minimum bid amount, the bid is automatically marked as unsuccessful. Therefore, Applicants submit that Fisher fails to disclose each and every element of the invention. As a result, Applicants respectfully submit that the Office has failed to state a *prima facie* case of obviousness with respect to independent claim 1.

### CONCLUSION

In summary, Appellants submit that claims 1-10 are allowable because the Examiner has not shown that all the claim limitations are taught or suggested by the prior art. Therefore, Appellants submit that the obviousness rejections are untenable and requests that the Board reverse the rejections set forth in the Office Action.

Respectfully submitted,



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## CLAIMS APPENDIX

The following is a listing of the current claims involved in the appeal:

1. A computer implemented method for matching commodity suppliers with intending purchasers, the method comprising the steps of:

obtaining supply information including a plurality of supply quantities and a supply price that for each supply quantity indicates a supply cost from at least one commodity supplier for a particular commodity item and arranging the information into a supply list for storage in a database, wherein the supply price lowers as the supply quantity increases, and wherein each supply quantity is classified into a plurality of supply quantity ranges that indicate a maximum supply quantity range for each commodity supplier;

receiving purchase wish information including a desired purchase price and a desired purchase quantity for said particular commodity item from intending purchasers through a network for a predetermined period of time;

storing the received purchase wish information in said database;

after said predetermined period of time, collecting said purchase wish information stored in said database and producing a purchase wish list having the information arranged in a predetermined order;

selecting an optimum combination of intending purchasers, selling quantities, selling prices, commodity suppliers, supply quantities, and supply prices by comparing only the desired purchase price and the desired purchase quantity of said purchase wish list with the supply price and supply quantity of said supply list by calculating a total profit using an iterative aggregation of profit for each additional intending purchaser; and

transmitting a purchase admission notification to the intending purchasers selected in said selecting step,

wherein an intending purchaser who bids lower than the supply price for the particular supply quantity is not automatically disqualified.

2. The method according to claim 1, wherein the plurality of supply quantity ranges each have a same predetermined span, and one or more corresponding supply prices are indicated for each of said supply quantities for use in a single instance of the selecting step.

3. The method according to claim 2, wherein said purchase wish list is arranged such that said desired purchase prices are placed in descending order from highest to lowest.

4. The method according to claim 3, wherein said selecting step selects the optimum combination so that gross profit of said seller is maximized, the selecting step further comprising:

determining a first value by summing a product of the desired purchase price and the desired purchase quantity for each transaction;

determining a second value by summing the purchase quantity for each transaction;

determining a third value by multiplying the second value and the supply price corresponding to the supply quantity range in the supply list that includes the second value; and  
calculating the gross profit by subtracting the third value from the first value.

5. The method according to claim 4, wherein said selecting step comprises the steps of:

accumulating the desired purchase quantities by referring to said purchase wish list;  
checking within which supply quantity range in said supply list the accumulation result falls and determining a minimum supply price within the corresponding supply quantity range;  
and

calculating an aggregate gross profit using the determined supply price, wherein said accumulating step, said checking step, and said calculating step are repeated for all the purchase wish information in the purchase wish list, and intending purchasers up to the one corresponding to an iteration, in which the maximum aggregate gross profit has been obtained, are admitted to purchase.

6. A commodity sales system comprising:

a database storing, in a supply list, information about plurality of supply quantities and a supply price that for each supply quantity indicates a supply cost obtained from at least one commodity supplier for the particular commodity item, wherein the supply price lowers as the supply quantity increases, and wherein each supply quantity is classified into a supply quantity range indicating a maximum supply quantity range for each commodity supplier;

means for receiving purchase wish information including a desired purchase price and a desired purchase quantity for said particular commodity item from intending purchasers through a network for a predetermined period of time, and storing the received purchase wish information in said database;

means for collecting said purchase wish information stored in said database and producing a purchase wish list having said information arranged in a predetermined order after said predetermined period of time;

means for selecting an optimum combination of intending purchasers, selling quantities, selling prices, commodity suppliers, supply quantities, and supply prices by comparing only the desired purchase price and the desired purchase quantity of said purchase wish list with the supply price and supply quantity of said supply list; and

means for transmitting a purchase admission notification to the intending purchasers selected by said selecting means.

7. The system according to claim 6, wherein the plurality of supply quantity ranges each have a same predetermined span, and one or more corresponding supply prices are indicated for each of said supply quantities for use in a single instance of the selecting step.

8. The system according to claim 6, wherein said purchase wish list is arranged such that said desired purchase prices are placed in descending order from highest to lowest.

9. The system according to claim 8, wherein said selecting means selects the optimum combination so that the gross profit of said seller is maximized, wherein the selecting means:

determines a first value by summing a product of the desired purchase price and the desired purchase quantity for each transaction;

determines a second value by summing the purchase quantity for each transaction;

determines a third value by multiplying the second value and the supply price corresponding to the supply quantity range in the supply list that includes the second value; and calculates the gross profit by subtracting the third value from the first value.

10. The system according to claim 9, wherein said selecting means comprises:

means for accumulating the desired purchase quantities by referring to said purchase wish list;

means for checking within which supply quantity range in said supply list the accumulation result falls and determining a minimum supply price within the corresponding supply quantity range; and

means for calculating an aggregate gross profit using the determined supply price, wherein said accumulating means, said checking means, and said calculating means repeat accumulation, checking, and calculation, respectively, for all purchase wish information included in said purchase wish list, and intending purchasers up to one corresponding to an iteration, in which maximum aggregate gross profit has been obtained, are admitted to purchase.

## **EVIDENCE APPENDIX**

No evidence is entered and relied upon in the appeal.

## **RELATED PROCEEDINGS APPENDIX**

No decisions rendered by a court or the Board in any proceeding are identified in the related appeals and interferences section.